APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,821	11/10/2001	Tero Heinonen	0143US-Locus	3191

23521   7590   11/03/2004

SALTAMAR INNOVATIONS
30 FERN LANE
SOUTH PORTLAND, ME 04106

EXAMINER
MEHRPOUR, NAGHMEH

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/052,821	HEINONEN ET AL.
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-13* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-13* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some *   c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *4-6*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement filed reference listed in the information

Disclosure submitted on 04/10/02, 09/10/02, 09/30/02 have been considered by the

examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   **Claims 1-13**, are rejected under 35 U.S.C. 102(b) as being anticipated by Ekstrom

(US Patent Number 6,052,597).

Regarding claim 1, Ekstrom teaches a method for locating mobile terminals in a mobile

network, the method comprising the steps of:

receiving location-dependent parameter sets, each parameter set to include at least

one parameter indicative of the location of an individual mobile terminal (col 8 lines 1-

8);

on the basis of the parameter sets forming a transition network (col 8 lines 30-38)

comprising

nodes interconnected by links (col 8 lines 23-38), nodes interconnected by links

are inherently included in the network, DUB-WIN@ is an example a system that making

the vehicles rout graphically (col 8 lines 8-40);

(1) an individual node represents a parameter set having a given parameter

content, the node coordinates relate to a certain location (col 8 lines 3-8, col 10 lines 10-

17, lines 30-40), each measurement by position handler that are not overlap are

considered as a node,

(2) a link connecting two neighboring nodes represents a transition between two

successive estimated locations of a mobile terminal (col 9 lines 64-67), and

(3) the node coordinates relate to a certain location (col 10 lines 31-43);

adjusting the coordinates of a node responsive to coordinates of neighboring

nodes directly connected to said node through a link (col 8 lines 15-41, col 10 lines 30-

43, lines 59-67);

for a selected set of nodes in the limiting movement of the node within the

transition network and using the coordinates of the node (col 10 lines 30-43)

representing a parameter set received to indicate a location estimate for said parameter

set (col 11 lines 55-64).

Regarding claim 2, Ekstrom inherently teaches a method wherein the forming step

includes forming a single node representative of a plurality of parameter sets (col 3 lines

19-25, col 10 lines 10-17, lines 30-33);

the terminal coordinates indicated by said parameter sets having a relative

displacement smaller than a predetermined limit (col 10 lines 30-41), by comparing the

measurement with a reference network, and filtering the data by dropping the

displacement larger that a predetermined limit which the reference data network.

Regarding claim 3, Ekstrom inherently teaches a method wherein the forming step

further comprises:

linking a plurality of paths to each other at nodes, which represent parameter sets

with being indicative of locations having a relative displacement smaller than a

predetermined limit (col 10 lines 30-41). Establishing the position data network (col 10

line 40, lines 58-67), and nodes interconnected by links are inherently included in the

network, DUB-WIN@ is an example a system that making the vehicles rout graphically

(col 8 lines 8-40);

linking between successive locations of one mobile terminal, whereby the nodes

and links identifying said locations represent a path traveled by said one mobile terminal

(col 8 lines 15-41, col 10 lines 30-43).

Regarding claim 4, Ekstrom teaches a method wherein the adjusting step is performed

for a selected set of nodes of the transition network (col 10 lines 25-40, col 11 lines 51-

54).

Regarding claim 5, Ekstrom teaches a method further comprising:

performing said adjusting step for a selected set of nodes of the transition network (col

10 lines 25-40, col 11 lines 51-54);

monitoring the movements of the nodes during the adjusting step (col 8 lines 42-56);

and

repeating said adjusting step until the displacement of the nodes fulfills a predetermined

condition (medium) (col 10 lines 25-40). As evidenced by Ishikawa (US Patent Number

6,329,948 B1) (col 7 lines 29-67, col 8 lines 1-6).

Regarding claim 6, Ekstrom inherently teaches a method wherein said adjusting step is

repeated until the largest displacement experienced by an individual node is below a

preset threshold value (col 8 lines 42-51). As evidenced by Ishikawa (US Patent Number

6,329,948 B1) (col 7 lines 29-67, col 8 lines 1-6).

Regarding claim 7, Ekstrom teaches a method wherein the limiting step includes

updating positions obtained in said adjusting step, whereby the updated positions are

used for finding the location estimate (col 8 lines 142-51)

Regarding claim 8, Ekstrom teaches a method wherein the limiting step includes

keeping at least one of the nodes in a fixed position (col 8 lines 20-25).

Regarding claim 9, Ekstrom teaches a method wherein in the adjusting step, the

neighboring nodes are adapted to effect the position of a node in a manner which is

dependent on the path to which the neighboring nodes belong (col 9 lines 63-67, col 10 lines 30-43).

Regarding claim 10, Ekstrom teaches a method wherein the adjusting step further comprises:

calculating the center of gravity of the neighboring nodes and moving the node to the center of gravity obtained in the calculating step (col 11 lines 45-49).

Regarding claim 11, Ekstrom teaches a method wherein the adjusting step further comprises:

calculating the center of gravity of the neighboring nodes, the center of gravity being calculated for each of the nodes representing the same parameter set (col 11 lines 45-64); and

said using step includes determining the center of gravity for the centers of gravity obtained in the calculation of the adjusting step, whereby the center of gravity obtained in the determining step is used to indicate the location estimate for said parameter (col 11 lines 45-64).

Regarding claim 12, Ekstrom teaches a system for locating mobile terminals in a mobile network, the system comprising:

first means for receiving parameter sets, each parameter set comprising at least one parameter indicative of the location of an individual mobile terminal (col 8 lines 30-38);

second means for finding a location estimate for a parameter set received, the location estimate indicating the location of the respective mobile terminal (col 8 lines 30-38, col 11 lines 55-64);

third means for forming a transition network (col 8 lines 30-38) comprising:

nodes interconnected by links (col 8 lines 23-38), nodes interconnected by links are inherently included in the network, DUB-WIN@ is an example a system that making the vehicles rout graphically (col 8 lines 8-40);

(1) an individual node represents a parameter set having a given parameter content, the node coordinates relate to a certain location (col 8 lines 3-8, col 10 lines 10-17, col 10 lines 30-40);

(2) a link connecting two neighboring nodes represents a transition between two successive estimated locations of a mobile terminal (col 9 lines 64-67), and

(3) the node coordinates relate to a certain location (col 10 lines 31-43);

fourth means for adjusting the coordinates of a node by means of the coordinates of the nodes directly connected to said node through a link (col 8 lines 15-41, col 10 lines 30-40. col 11 lines 45-65);

fifth means for limiting the movement of at least one of the nodes within the transition network (col 8 lines 28-34, col 10 lines 30-43), wherein the second means are adapted to use the coordinates of the node representing a received parameter set to indicate the location estimate for said parameter set (col 10 lines 10-17, lines 58-65).

Regarding claim 13, Ekstrom inherently teaches a computer readable media containing

software that when executed by a computer will cause said computer to substantially

perform the steps of claim 1 (col 10 lines 1-5).

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Knockeart et al. (US Publication 2004/0066330 A1) disclose vehicle information system

Bonta (US Patent 6,014,565) disclose method for service planning in a radio telephone

system

Sugiura (US Patent 6,362,783) disclose wireless communication system and method for

detection of position of radio mobile station

Uchara et al. (US Patent Number 6,477,380 B1) disclose system and method for

estimating location of mobile station

Furuhata (US Patent Number 6,226,405 B1) disclose method and apparatus for updating

node position

Ishikawa (US Patent Number 6,329,948) disclose method of determining position of

wireless communication terminal

Stewart (US Patent Number 2003/0190921 A1) disclose providing promotional material

based on related travel patterns

Lee (US Patent Number 6,459,903 B1) disclose method and system for locating mobile

station in mobile telecommunication system

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Naghmeh Mehrpour whose telephone number is 703-308-

7159. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Marsha Banks-Harold be reached (703) 305-4379.

The fax phone number for the organization where this application or proceeding

is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

NM

November 1, 2004